

LAKE ODESSA

HABITAT REHABILITATION AND ENHANCEMENT PROJECT

**Pools 17-18
Upper Mississippi River Miles
435.0 - 440.0**

**Louisa County, Iowa
Rock Island District**



LOCATION:

Lake Odessa is a 6,788 acre backwater complex located 15 miles south of Muscatine, Iowa, in Louisa County. The project lands are Federally owned by the Corps of Engineers and are managed by the U.S. Fish and Wildlife Service and the Iowa Department of Natural Resources.

RESOURCE PROBLEM:

While Lake Odessa has traditionally had high fall duck and geese populations and significant duck production, the existing water control structures, high amount of seepage due to sandy soil, and overall complex size limit water level management with regard to drawdown, excess water release, and fall reflooding. Breaches of existing levees have resulted in frequent losses of emergent aquatic vegetation used by migratory waterfowl. Sedimentation from frequent levee breaks and overtopping flood events has decreased the extent of deep water aquatic habitat. Fish winterkills and reduced circulation of well-oxygenated water are being experienced.

The goals of the proposed project are to restore and protect wetland, terrestrial, and aquatic habitat. The objectives identified to meet these goals were: (1) reduce forest fragmentation; (2) increase bottomland hardwood diversity; (3) enhance migratory bird habitat; (4) restore sand prairie; (5) increase habitat for overwintering fish; (6) provide safe areas for developing fish; (7) protect habitat features; and (8) protect archeological sites.

PROJECT FEATURES:

- * Restore the existing perimeter levee system that protects the Lake Odessa complex;
- * Construct a spillway to control flood events and protect the levee;
- * Enhance water management capability at moist soil management areas;
- * Dredge deep holes/channels to enhance overwintering habitat for the fishery;

- * Create a fish nursery area;
- * Plant 93 acres of mast-producing hardwood trees; and,
- * Reestablish a 36 acre sand prairie.

PROJECT OUTPUTS:

Enhancing water level management capability will provide more moist soil habitat, greater vegetation diversity and growth, and reliable food supplies to migratory waterfowl. Fisheries enhancement dredging will create areas of deeper water and/or access to deeper water for overwintering fish. Mast tree planting will improve the quality and quantity of forest habitat by re-introducing mast-producing species to a forest community increasingly dominated by silver maple and cottonwood. Levee restoration will provide reliable flood damage protection, reduce flood damages and levee failures, and protect archeological sites from further erosion. The sand prairie planting will increase habitat complexity and provide feeding and nesting opportunities for a wide variety of wildlife. The fish nursery will allow fry to be reared to the fingerling stage in a predator free environment.

FINANCIAL DATA:

General design and construction costs are estimated at \$9,500,000. Annual costs for operation, maintenance, and repair will be the responsibility of the Iowa Department of Natural Resources and the U.S. Fish and Wildlife Service.

STATUS:

A draft Definite Project Report (DPR) is scheduled for completion in March 2004.